

IN THE CLAIMS:

1. (CURRENTLY AMENDED) Spectroscopic ellipsometer (1) comprising:

a light source (2) emitting a light beam (3),

a polarization state generator section (4) containing a collimation optic (9) collimating,

said (3) and a generator of polarization (10) that polarizes the light beam,

a first mirror (5) focusing the beam (3) to a small spot on the surface of a sample (1) to an incidence angle θ .

a second mirror (6) connecting the beam modified by the sample (1) to an analyzing

section (7) comprising a polarization analyzer (17) that analyses the beam,

means (8) for detecting and analyzing spectroscopically said beam,

wherein

the first (5) and second (6) mirrors are parabolic mirrors,

the light beam through the polarization state generator section (4) up to the first mirror (5) is parallel enabling achromatism, and

said incidence angle θ is largely varied without shifting of the location of the small spot on the sample surface (1).

2. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1,

wherein the generator is of polarization (10) is a photoelastic modulator.

3. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1,

wherein the generator of polarization (10) is a rotating analyzer.

4. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, wherein the generator is of polarization (~~10~~) is a rotating polarizer.

5. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, wherein the generator of polarization (~~10~~) is a rotating compensator.

6. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, wherein the polarization state generator section (~~4~~) and the analyzing section (~~7~~) are translated vertically with respect to the parabolic mirrors (~~5,6~~) to vary the incidence angle θ .

7. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, where both mirrors (~~5,6~~) and the sample (~~1~~) are vertically translated with respect to the analyzing section (~~7~~) and polarization state generator section (~~4~~) to vary the incidence angle θ .

8. (PREVIOUSLY PRESENTED) Spectroscopic ellipsometer according to claim 6, wherein the incidence θ is varied between 0° and 90° .

9. (CURRENTLY AMENDED) Spectroscopic ellipsometer accordingly to claim 1 wherein the said two parabolic mirrors (~~5,6~~) have the same optical characteristics.

10. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, where in the axis of both parabolic mirrors (~~5,6~~) and the sample surface are merged.

11. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 10 wherein both parabolic (~~5~~,~~6~~) are positioned symmetrically with respect to a plan passing by their optical axis and being normal to the sample surface.

12. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 1, wherein the shape of the parabolic mirrors (~~5~~,~~6~~) is manufactured by diamond turning.

13. (CURRENTLY AMENDED) Ellipsometric system according to claim 12, where in the distance from the polarization state generator section (~~4~~) to the sample (~~1~~) and the distance from the analyzing section (~~7~~) to the sample (~~1~~) are optimized to avoid diffraction influence created by diamond turning artifact.

14. (CURRENTLY AMENDED) Spectroscopic ellipsometer according to claim 13, wherein the parabolic mirrors (~~5~~,~~6~~) are treated with a post-polishing process.

15. (PREVIOUSLY PRESENTED) Spectroscopic ellipsometer according to claim 1, wherein the size of the spot is close to the diffraction limits.